GEOGRAPHIC NEWS BULLETINS

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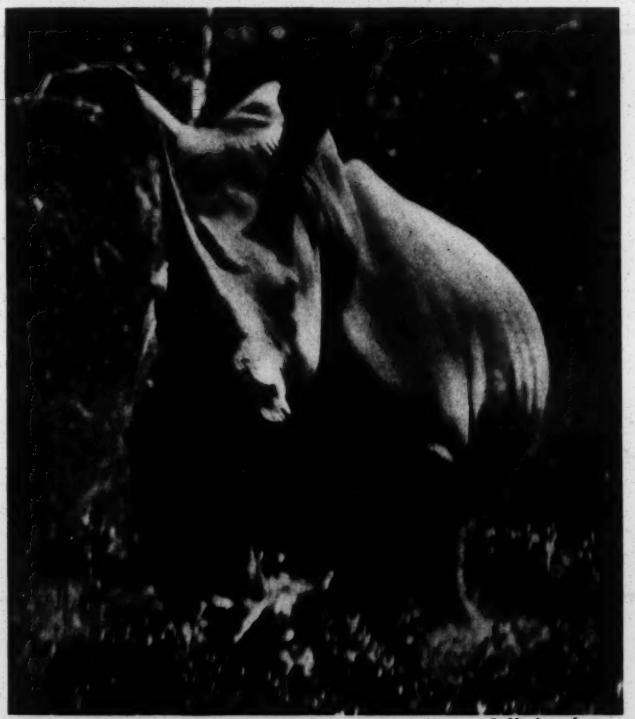
NOTE TO TEACHERS: Because of the spring or Easter recess in many schools, there will be no issue of the GEOGRAPHIC NEWS BULLETINS on Monday, April 18, 1938. The BULLETINS will be resumed as usual on Monday, April 25, 1938.



© *Herbert Lang*

A WHITE RHINO "HORNS IN" ON THE PICTURE

The largest of several species of rhinoceros is the rare African white, which is really slate-gray. Capt. C. W. R. Knight photographed several examples of this large land mammal on his South African expedition for the National Geographic Society (Bulletin No. 2).

HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic News Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers in the United States and its possessions for one year upon receipt of 25 cents (stamps or money order); in Canada, 50 cents. Entered as second-class matter, Jan. 27, 1922, Post Office, Washington, D. C., under act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of Oct. 3, 1917, authorized Feb. 9, 1922. Copyright, 1938, by National Geographic Society, Washington, D. C. International copyright secured. All rights reserved. Quedan reservados todos los derechos.

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General Headquarters, Washington, D. C.

Warsaw, New Focus of Eastern Europe

"WARSAW," said Napoleon, "is always amusing."

The famous conqueror and dictator, were he alive today, might have other and weightier comments to make about the city on the Vistula (Wista) in the light of recent events.

Success of Polish demands against its neighbor, Lithuania, followed by a Polish suggestion that the four Baltic States—Poland, Lithuania, Latvia, and Estonia—form a neutral bloc between the German Reich and Soviet Russia, has given new stature to Poland's dynamic capital—the old-new city of Warsaw.

Polish Capital Often Compared to Paris

A Baltic entente, or even an economic union, controlled from Warsaw, would mean that the Polish capital would at once become one of the most important and most powerful political centers in Europe. The combined populations of the four Baltic States is about 38,000,000, and, in addition, they include some of the most intensively cultivated farm lands, richest forests, most valuable mineral deposits, and busiest industrial areas of the continent.

"Warszawa," which we call Warsaw, is not included on the average American's tour of Europe, but it has many attractions for visitors as well as natives. Poles forever compare their capital to Paris. Centuries of oppression and foreign rule did not entirely break the Polish spirit of gaiety and optimism. Warsaw seems to blend this spirit with a solemn dignity that is unique among European cities.

Like Parisians, the Poles are lovers of beauty. Their capital is filled with churches, palaces, and stately public buildings. Wide, tree-lined boulevards radiate from the old market center, some leading to beautiful parks. Warsaw also has sections where narrow streets and quaint passageways lead back to the Middle Ages.

Here East and West Meet

With a population of 1,178,000, Warsaw is by far the largest city in Poland, and one of the ten biggest cities on the European mainland. In addition to being an important manufacturing center, Warsaw is one of those natural crossroads that draw trade, wealth and people from hundreds of miles of adjacent territory. Here, between Western Europe and the vast Soviet Union, East and West meet. Like the spokes of a wheel, trunk line railroads reach out to Berlin, Moscow, Vienna, Odessa, Prague, Danzig, and up the "Corridor" to Poland's new Baltic port—Gdynia.

Warsaw's history is both long and turbulent. It had its beginnings in the 9th century. At first it was merely a village around the castle of a feudal lord. In 1550, because of its superb geographical location, it was made capital of the then powerful Polish kingdom. As it grew to be a great city, it felt the heavy hand of numerous conquerors. In 1918, for the third time in the course of five centuries, Warsaw again became capital of an independent Poland.

Since its rebirth Poland has shown a keen interest in all things American, and Warsaw's theatre-going public, which is large, shows a marked preference for Hollywood films and Broadway plays. Partly this is due to the presence of many Poles in America, but some of Poland's friendly feeling for the United States dates back to the days of our Revolution, in which a number of Poles took a personal part. Chief of these were Pulaski and Lithuanian-born Kosciuszko, each of whom is honored with a statue in our national capital.

All Poland loves music and dancing, and nowhere in the country is wining, dining, dancing (both ballet and social dancing) and singing better done than in the

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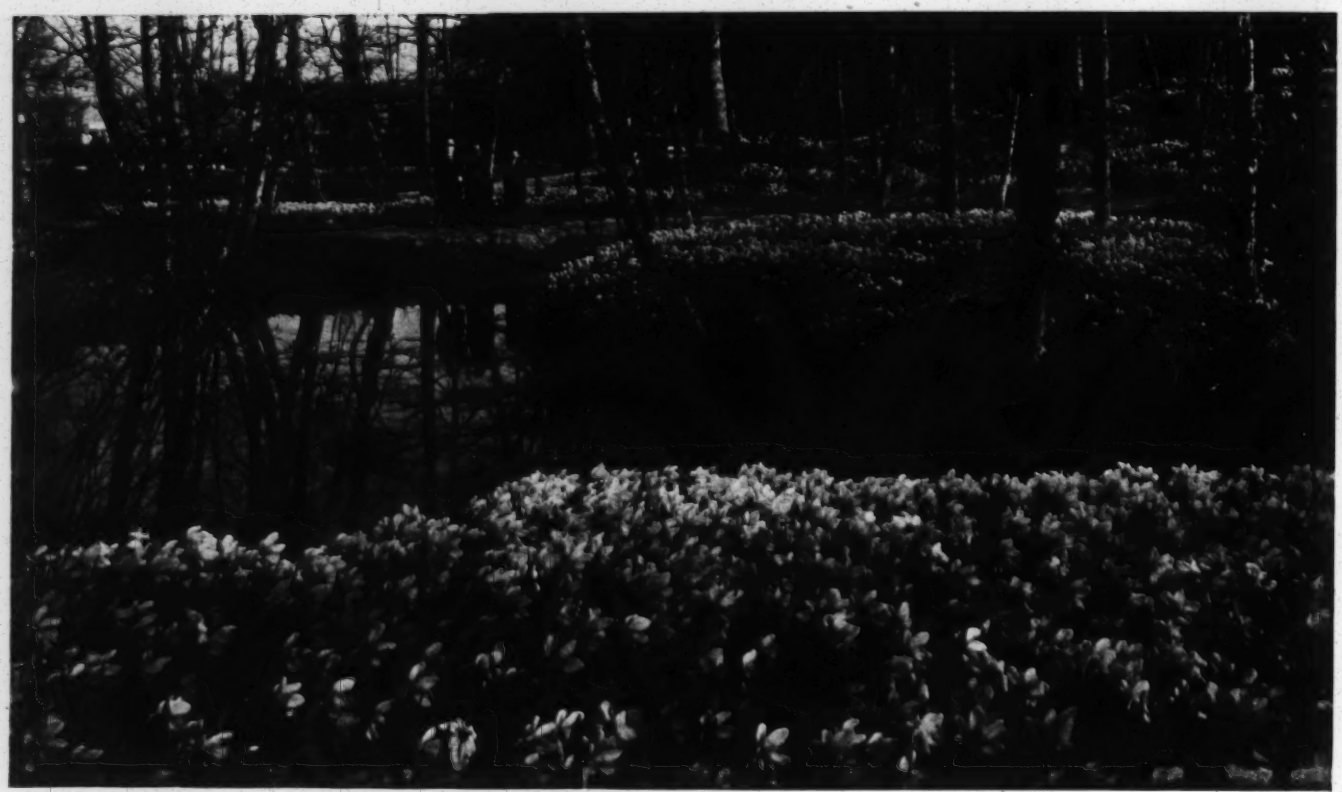

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TULIP TIME IN THE NETHERLANDS ALSO MEANS NARCISSUSES, JONQUILS, AND HYACINTHS

Even the woods are aglow with color as nodding blossoms welcome visitors to the International Flower Show near Haarlem (above). The 16-mile road from Leiden to Haarlem is one long pageant of flowering beauty (Bulletin No. 2).

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Tulip Time in The Netherlands

THERE is at least one international question with a pleasant, peaceful ring: "How does your garden grow?" For all is quiet on the flower front, and a pilgrimage of American garden experts is under way to visit with Netherlands gardeners in a friendly over-the-back-fence session concerning this year's tulip beauties.

Radiant fields of tulips and hyacinths stretching for sixteen miles of blazing color along the road from Leiden to Haarlem—this is the spectacle greeting visitors in The Netherlands from early April to mid-May.

Sightseers making airplane flights over Netherlands bulb fields look down on wide bands of color, for usually each bed is devoted to flowers of a single shade. In some years the bulbs are planted to form American, Netherlands, and other national flags.

Plots of Color Stretch into Distance

One may pass through the bulb district by train in twenty minutes, or almost as quickly by bus or automobile, but perhaps the best way to view the flowers is from a leisurely pedaled bicycle. Since The Netherlands has a bicycle "population" running into the millions, the cycler will have plenty of company on the way. Men spin past, at their backs huge wicker hampers filled with flowers. A man and wife wheel by on a double, side-by-side bicycle, carrying on a seat behind them a row of three little girls.

Starting at the old university town of Leiden, home of the Pilgrim Fathers from 1609 to 1620, one may pedal northward between gay bulb fields to the great flower capital of Haarlem (illustration, inside cover), with its lofty spire and great organ, making stops along the way at Sassenheim, Lisse, Hillegom, and other quaint flower villages.

One passes slowly turning windmills, clusters of cottages, with tiled roofs the color of the coral chokers around plump necks of Volendam women. Under the lavender-pearly sky, the bulb fields spread broad flat vistas of bright color cut by tranquil canals (illustration, next page) along which creep clumsy black barges. The canals are crossed by occasional hump-backed bridges and here and there are bordered by weeping willows.

Bulb Farms on Site of Former Sand Dunes

The bulb fields cover a narrow strip about sixteen miles long and four miles wide in the western part of The Netherlands. Eastward lie tracts of land reclaimed by draining shallow Haarlem Lake in 1853. On the west, billowing sand dunes protect the bulb fields from the North Sea. Long ago a second range of dunes occupied the site of the fields, giving them their present light sandy soil that, well fertilized, contributes to their success.

Hedges of beech and thuja trees protect the flower fields from cold winds, and planted between the beds stand bristling, miniature windbreaks of tall grass. The tulips are set out in long regiments about a yard wide, separated by narrow footpaths along which gardeners and visitors walk.

Dainty tulips, striped pink and white like peppermint sticks, vie with strange parrot tulips whose curved and twisted pink petals are "feathered" with green markings. Yellow tulips glow as if they held lighted candles.

Some of the tulips bear proud names, such as "Prince of the Netherlands," "Louis XIV," "King Harold." Addison, overhearing a conversation thickly

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capital. Warsaw has scores of restaurants, where gay gypsy orchestras play the cymbalon (a triangular wired instrument, played with rods). In artistic dancing Warsaw leads, the mazurka and the polonaise being two world famous examples. Poland also gave to the world of music the composer Chopin, whose heart lies enshrined in one of Warsaw's chief churches.

Note: Students seeking background material about Poland should consult "Bright Bits in Poland's Mountainous South," (color insert), *National Geographic Magazine*, March, 1935; "Poland of the Present," March, 1933; "Poland, Land of the White Eagle," April, 1932; "Struggling Poland," August, 1926; "Flying Over Europe," March, 1925; "Devastated Poland," May, 1917; and "Partitioned Poland," January, 1915.

The boundaries of the States forming the proposed Baltic Bloc may be located on The Society's new map of Europe and the Mediterranean, issued as a supplement to the April, 1938, *National Geographic Magazine*. Separate copies of the map may be obtained at 50c (paper) and 75c (linen).

Bulletin No. 1, April 11, 1938.

© *Jan Bulhak*

WARSAW'S SHIP CAME IN CENTURIES AGO

The symbolic ship of fortune, whose arrival is supposed to fulfill wishes, brought importance to Warsaw in the Middle Ages. An inland city, its riverside site on the Vistula tied it into the network of Baltic Sea trade. The ship decoration over the old doorway of No. 28, Piwna Street, Warsaw, may be a remnant of a medieval merchants' guild which made its headquarters somewhere beyond the long dark corridor within. Latin characters on the sign indicate that the Polish alphabet, so long banned in favor of Russian, is reinstated. *Sklad Form de Obuwia* announces that shoe-trees and forms for other footgear may be bought inside.

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South African Expedition Films Rare Wild Life

CAPTAIN C. W. R. KNIGHT, famous British trainer and photographer of large birds, is returning to England after a successful expedition in South Africa, where he filmed rare birds and animals for the National Geographic Society.

Captain Knight is well known in the United States. With trained eagles and hawks he has frequently appeared on American lecture platforms, describing his falconry school in England, and showing camera studies of many little-known birds and mammals (illustration, next page).

Crowned Eagles Become Film Stars

Five months ago, Captain Knight sailed for South Africa, chiefly to film the Crowned Eagle in its native home. He discovered that most nests of these eagles are in the highest trees in the forests, making it impossible to build blinds and focus cameras into them.

He found one family of eagles, however, with a nest 50 feet from the ground. High surrounding trees made possible the construction of a blind from which every move of the eagles could be observed.

Captain Knight photographed the activities in the next four weeks while the mother eagle sat on the eggs and the male brought small monkeys and other animals caught in the vicinity. Because the Crowned Eagles are so fond of monkey flesh, they are called the "ogres of Africa's monkeys." Monkey bones litter the earth beneath their nests.

After the eggs hatched, one of the eaglets died; the other was captured by Captain Knight, who will train it to falconry.

Secretary Bird Kicks Food to Death

Captain Knight's motion picture and still camera also recorded rare shots of the Secretary Bird, which is almost extinct. A member of the vulture tribe, this bird kicks snakes, lizards, and moles to death with its stiltlike legs, then swallows them whole.

"The photographs of the Secretary Bird feeding its young on lizards, locusts, and snakes may help to deter misguided inhabitants of Africa from destroying a bird which, because it resembles a vulture or eagle when on the wing, is so frequently destroyed," Captain Knight reported to The Society.

The explorer also made photographic studies of the white rhinoceros (illustration, cover), giraffes, hammer-head storks, giant sand moles, wildebeests and monkeys.

Note: See also "Adventures with Birds of Prey," *National Geographic Magazine*, July, 1937; "Rhodesia, the Pioneer Colony," June, 1935; "Week-ends with the Prairie Falcon," May, 1935; "Eagle, King of Birds and His Kin," July, 1933; "Photographing the Nest Life of the Osprey," August, 1932; "Under the South African Union," April, 1931; "Eagle in Action," May, 1929; "Falconry, Sport of Kings," and "American Birds of Prey," December, 1920.

See also in the GEOGRAPHIC NEWS BULLETINS: "Falconry Expert To Hunt Rare African Birds with Camera," week of April 12, 1937.

Students of bird lore will be interested in The Society's "Book of Birds," containing all major species of birds of the United States and Canada in full color. The two volumes contain 228 photographs, 17 migration maps, and paintings of 950 birds.

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sprinkled with names of distinguished men, once expected to meet illustrious company and was disappointed to learn the notables were only tulips!

Flowers Used To Fertilize Fields

Beautiful as the blooms are, they interest the growers chiefly as indications of healthy bulbs. Before the blossoms shatter, they are cut down and carried off in baskets to be used as fertilizer on the fields. In June and July, most of the bulbs are dug up again, cleaned, dried, and stored. In midsummer, when tourists rush through The Netherlands, there is nothing to show of all the lovely blooms but brown fields with forlorn lines of grass windbreaks, and, through the open windows of warehouses, glimpses of bulbs drying on wooden racks. All during August, September, and October, merchants are busy packing and exporting bulbs to the rest of Europe and North America.

Three hundred years ago, in 1634-1637, tulips brought from Constantinople, via Vienna and France, became a mania in The Netherlands. Dumas the elder describes this tulip craze in his novel *The Black Tulip*. Netherlanders lost their usually sensible heads over the new flower, speculated wildly, and sometimes spent their frugal savings for a single bulb, some of which cost 13,000 florins apiece, or about $5,000. Imagine the dismay of the man who, it is said, ate one of these bulbs by mistake, thinking it an onion!

Note: The Netherlands in tulip time is described in "Some Odd Pages from the Annals of the Tulip," *National Geographic Magazine*, September, 1933; and "Tulip Time in The Netherlands" (color insert), September, 1929.

Other Netherlands material will be found in "A New Country Awaits Discovery," *National Geographic Magazine*, September, 1933; "A Vacation in Holland," September, 1929; "Flying Over Europe," and "The Singing Towers of Holland and Belgium," March, 1923; "Holland's War with the Sea," March, 1923; "The Battle-Line of Languages in Western Europe," February, 1923; "The Citizen Army of Holland," June, 1916; and "Glimpses of Holland," also "The City of Jacqueline," January, 1915.

Bulletin No. 2, April 11, 1938.

© *K.L.M. Royal Dutch Airlines*

"WATERING" IS DONE ON A GENEROUS SCALE IN THE NETHERLANDS

Patches of gardens become long islands in the canal-threaded country near Brock op Langendijk. Paths and fences are almost unnecessary. The "main street" is the stream passing between strings of houses (left foreground to upper right), and cross streets are narrow hump-backed bridges.

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Northwest Territory Proved the Thirteen States "Grown Up"

A BAND of bearded "pioneers" in buckskin suits and coonskin cap is traveling the long, long trail a-winding back into America's past. It is retracing the trek of forty-eight venturesome New Englanders who set out from Massachusetts, in 1787, to "go west" for new worlds to conquer. Goal of today's retracers is Marietta, Ohio, and that particular yesterday in American history when the Northwest Territory got its start.

This re-enactment of a historic migration is part of a widespread celebration of the 150th anniversary of the Northwest Territory—the more than a quarter-million square miles of wilderness between the Great Lakes, the Mississippi on the west, and the Ohio River on the south.

Slavery Prohibited in New Territory

As this area was gradually digested by the young United States, it proved that the new nation had not bitten off more of the continent than it could chew. It became a symbol of national growth, a sign that the original Thirteen States could get over their "unlucky" number and expand without losing unity.

Did the fateful progress start when a busy and harassed Congress, convening in New York, passed an ordinance on July 13, 1787, for governing the "Territory Northwest of the Ohio"? The ordinance guaranteed religious freedom, right of trial by jury, public schools, and freedom from slavery even before another Convention, meeting quietly in Philadelphia, wrote some of those principles into a document adopted in September of the same year as the Constitution of the United States. Was the foundation for success laid when General Rufus Putnam organized pioneer parties leaving Massachusetts for Ohio in December, 1787, and January, 1788? Or was the real birthday of Northwestern triumph on February 1, 1788, when Arthur St. Clair took over the Territory as its first governor?

To be certain of celebrating the right anniversary, the commemoration is continuing for months, extending even into the summer of 1938 to recall that Marietta (illustration, next page) set up Ohio's first permanent local government on July 15, 1788.

Changed U. S. Map Style from Stripes to Checkerboard

The fate of the Northwest Territory made the map of the United States look more like a checkerboard than like a rainbow. Originally the area was claimed by four States, on the basis of grants from the King of England or treaties with Indians. New York claimed a small triangle at its southeastern tip, wedged in between Pennsylvania and Lake Erie.

But Virginia, Connecticut, and Massachusetts claimed the right of extending westward as far as possible; they might have become narrow bands of States striping the continent all the way across to the Pacific. Connecticut clung to 6,000 square miles, "the Western Reserve," until 1800. Surrender of territory to Congress for subdivision into new States changed geography as well as history.

Thomas Jefferson suggested carving the new country into ten states, to be served up under such foreign sounding names as Sylvania, Metropotamia, Assenisippia, and Cherronesus. Actually there emerged from the Old Northwest five full-grown States: Ohio first, then Indiana, Illinois, Michigan, and finally Wisconsin in 1848. Pennsylvania built up her northwest corner from the historic Territory's open spaces, and the eastern two-thirds of Minnesota was picked up from the Northwest's boundaries after Wisconsin had been sliced off.

One-fifth of U. S. Population Now Living There

Today the area is the home of more than twenty-five million people in the five full States formed from it—about one-fifth of the population of the whole United States.

Launching the new Territory involved Congress in some budget-balancing real estate deals. The famous Ohio Company, which started with a dozen men around a table at the Bunch of Grapes Tavern in Boston, bought more than 800,000 acres. The Symmes Purchase, marked off in the southwestern corner of Ohio for John Cleaves Symmes and other settlers from New Jersey, consisted of a quarter of a million acres. It was hoped that the statesman's bugbear, the national debt, could be paid off by land sales, even though the proceeds sometimes equalled thirty cents an acre.

Long before the settlers dared to build more windows in their houses than the family could man against Indian attack, they began to converge from the whole eastern seaboard upon the Northwest Territory. In the year after the Ordinance of 1787 some 20,000 came. Like General

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Photograph by Capt. C. W. R. Knight

HUNTERS ALL, THEY DISPLAY THEIR WINGSPREAD

Capt. C. W. R. Knight, famous British bird-trainer and explorer, has made a specialty of training birds to hunt, following the medieval practices of falconry. These specimens are ospreys, or fish hawks, which the Captain captured in New York State and transported to Inverness-shire, Scotland, to be released in an area from which their kind had virtually been exterminated. The Crowned Eagle is one of the catches made by Capt. Knight during his recent expedition to Africa for the National Geographic Society.

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Another Job for the Aerial Camera

TO FIGHT the mounting toll of accidents, traffic authorities have found a new weapon in aerial photography. Necessary apparatus—according to reports from Milwaukee where the device was recently tried out—includes one small captive balloon, controlled by ropes and guys from a passenger automobile equipped with trailer; and one camera suspended from the balloon and operated from below by means of batteries and a push button.

Result: Photographs of busy street crossings giving a bird's-eye view of traffic conditions at various hours, the effects of certain regulations and causes of congestion.

Studying traffic jams from such air pictures is a modern way of dealing with the peculiarly modern problem of cities on wheels. But aerial photography, particularly from captive balloons, is an old story.

Balloon Pictures Made Three Quarters of a Century Ago

As far back as 1861, nearly half a century before the history-making flights of the Wright brothers, the face of Boston, Massachusetts, was recorded from a captive balloon some 1,200 feet up.

Wilbur Wright himself, in 1911, made a few shots of the landscape with his simple ground camera. Around that time a fire at Salem, Massachusetts, was snapped from a plane. Published as a newspaper "scoop," it was claimed to be the first airplane illustration so used.

But aerial photography was at first very slow in advancing, largely because vibration and air currents made ordinary camera use almost impossible. It was during the World War that air mapping came of age. Recognized as an aid to military reconnaissance, it provided, according to some estimates, nearly four-fifths of all enemy information obtained.

Today, making maps and pictures from the air has become a highly specialized business, calling for trained men and technical equipment. Such photographs are made now anywhere from a few hundred feet off the ground all the way up to the rarefied atmosphere of the stratosphere. During the record-making balloon ascent sponsored by the National Geographic Society and the U. S. Army Air Corps in November, 1935, electrically operated cameras clicked regularly. They made vertical and oblique shots; they took pictures of the earth and the horizon; they made motion pictures and color pictures.

Air Maps and Pictures Serve Many Masters

To fill increasing demands for more and better bird's-eye photographs, special cameras that cover ever widening territory have been evolved with multiple lenses, automatic shutters, and other modern improvements. Many of these machines are attached to the plane; some point through windows like small cannons; others are built into the floor of the ship. With the recent advent of the "photographic airplane" designed for no other purpose, Old Mother Earth may be more photographed than a Hollywood movie star!

Long-range photographs are particularly useful in road planning, flood-control work, in studying soil erosion, or locating power-plant sites. Now and then, the air picture gets in the news by solving some odd problem, as when the promoters of a stadium boxing match suddenly discovered on the eve of the bout that they had no floor plan. Time was limited, but not too short to hire a commercial air photographer to fly over the stadium and take a picture.

Canada has made good use of the aerial photographer. With its vast open

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Putnam's band from Massachusetts, they traveled afoot, on horseback or in ox-carts to the nearest trail which could conduct them through the Alleghenies.

Pioneers Made Inland Port of Pittsburgh

The westward exit from Pennsylvania, however, was most easily made by water; in the first year of the Northwest rush, more than 900 boats set out down the Ohio from Pittsburgh and contributed their timber to houses.

General Putnam's pioneers, for instance, traveled overland through southern Pennsylvania to the town of West Newton, where they built flatboats and sailed down the Youghiogheny River into the Monongahela, which flows into the Ohio at Pittsburgh. The Ohio brought them to Fort Harmon, frontier outpost within whose protection they established the town named for Marie Antoinette—Marietta.

Note: See also "On Goes Wisconsin," *National Geographic Magazine*, July, 1937; "Indiana Journey," September, 1936; "Penn's Land of Modern Miracles," July, 1935; "Minnesota, Mother of Lake and Rivers," March, 1935; "Ohio, the Gateway State," May, 1932; and "Illinois, Crossroads of the Continent," May, 1931.

Bulletin No. 4, April 11, 1938.

Photograph by James A. G. Davey

OHIO'S OLDEST HOUSE HAS BEEN GIVEN A HOME IN MARIETTA

The veteran structure which was built within the original stockade protecting Marietta is now protected in a home of its own, the Campus Martius Museum. The two-story frame building was occupied by the pioneer Revolutionary general, Rufus Putnam, and formed part of the fortifications which the settlers named Campus Martius, in their zeal for importing culture into the western wilderness. This was the first permanent town in Ohio.

spaces such surveys are enormously helpful in forestry checks, for locating canoe trails, in mineral detection, etc.

Hunting coal and oil, both private and government agencies employ birdmen. Flying back and forth over a given area, the photographer's technique is somewhat like that of a man cutting grass. Later the many overlapping shots thus obtained are turned over to laboratory experts, made into a complete mosaic map, and, with the aid of scientific devices, studied for signs indicating the presence of natural wealth.

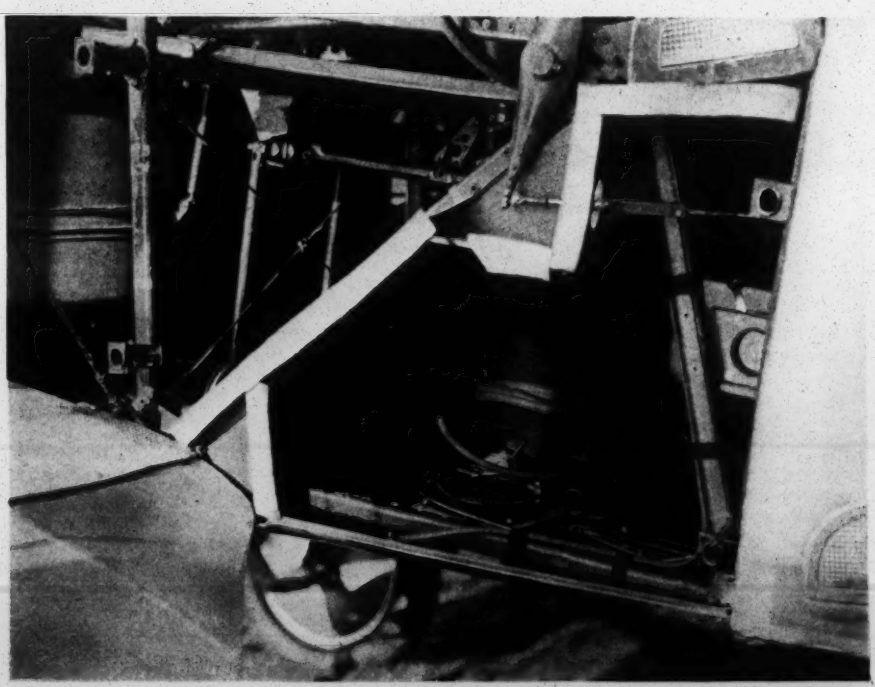
Air maps check up on shifting coast lines, and may even settle international disputes as to boundaries. For example, several years ago the U. S. Army Air Corps, at the request of a Special Arbitration Tribunal, took hundreds of photographs of territory claimed by both Guatemala and Honduras. With this information at hand, an agreement was reached.

Another spectacular rôle of the aerial camera involved the location of Maya Indian ruins in Mexico. Ancient Roman ruins in Britain have been spotted in the same manner.

Quicker, cheaper and under some circumstances more accurate than ground survey, the air map has not supplanted field work. Many factors, including possibilities of error in speeding planes, air bumps, unfavorable light, etc., must be considered. Flying at high altitude there is the question, too, of oxygen needs, and details of complicated equipment add to the expense.

Note: See also "Man's Farthest Aloft," *National Geographic Magazine*, January, 1936; "Exploring the Stratosphere," October, 1934; "Aerial Conquest of Everest," August, 1933; and "Mapping the Antarctic from the Air," October, 1932.

Bulletin No. 5, April 11, 1938.



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HIGH FLYING TO HELP MAPPING HAMPERS PHOTOGRAPHY

Altitudes necessary for a "full face" earth-portrait of mountain ranges may expose the photographic equipment to extreme cold, which freezes movable parts of the camera and cracks film. In the survey of inaccessible areas around Mt. Everest, in Nepal, cameras were equipped with "heaters"—padded fabric jackets with electric heating wires sewn in. To prevent overheating as the plane descended to lower altitudes, a thermostat turned the heat off.